

Transformations Practice

- Describe the transformations for

1) $y = 4 \sin\left(\frac{1}{2}x\right) + 3$

$a=4$ ↓ vertical stretch
 $b=\frac{1}{2}$ ↓ horizontal stretch
 $d=3$ ↓ shift up 3

2) $y = \frac{1}{2} \sqrt{-x} - 1$

$a=\frac{1}{2}$ ↓ vertical shrink
 $b=-1$ ↓ reflect over y
 $d=-1$ shift down 1

3) $y = (2x + 3)$

$b=2$ ↓ horizontal shrink
 $c=-\frac{3}{2}$ ↓ shift left 3

4) $y = -2 \ln(x - 1)$

$a=-2$ ↓ reflect over x
↓ vertical stretch
 $c=1$ ↓ shift right 1